

CLAIMS

1. A method of forming a transistor gate, comprising:
forming one or more conductive materials over a semiconductor substrate;
forming a block over the one or more conductive materials; the block comprising a photoresist mass and a material other than photoresist which is against the photoresist; and
transferring a pattern from the block to the one or more conductive materials to pattern a transistor gate construction from the one or more conductive materials.
2. The method of claim 1 further comprising removing the block from over the transistor gate construction.
3. The method of claim 1 further comprising defining a channel region within the semiconductor substrate beneath the transistor gate construction; and forming source/drain regions within the semiconductor substrate and spaced from one another by the channel region.
4. The method of claim 1 wherein the photoresist releases an acid, and wherein the material other than photoresist is a coating which cross-links when exposed to the acid from the photoresist.

5. The method of claim 1 wherein the material other than photoresist corresponds to a material designated as AZ R200™ by Clariant International, Ltd.

6. The method of claim 1 wherein the one or more conductive materials comprise conductively doped silicon.

7. A method of forming a transistor gate, comprising:
forming one or more conductive materials over a semiconductor substrate;

forming a patterned photoresist block over the one or more conductive materials; the photoresist block covering a first portion of the one or more conductive materials and leaving a second portion of the one or more conductive materials uncovered;

forming a coating over the patterned photoresist block and over at least some of the second portion of the one or more conductive materials;

selectively removing the coating from over the second portion of the one or more conductive materials while leaving the coating on the photoresist block; the photoresist block and coating remaining on the photoresist block together defining a masking block that is laterally wider than the photoresist block; and

transferring a pattern from the masking block to the one or more conductive materials to pattern a transistor gate construction from the one or more conductive materials.

8. The method of claim 7 further comprising removing the masking block from over the transistor gate construction.

9. The method of claim 7 further comprising defining a channel region within the semiconductor substrate beneath the transistor gate construction; and forming source/drain regions within the semiconductor substrate and spaced from one another by the channel region.

10. The method of claim 7 wherein the photoresist releases an acid, and wherein the coating forms cross-links when exposed to the acid from the photoresist.

11. The method of claim 7 wherein the material other than photoresist corresponds to a material designated as AZ R200™ by Clariant International, Ltd.

12. A method of forming a programmable read-only memory construction, comprising:

forming one or more conductive materials over a semiconductor substrate;

forming a block over the one or more conductive materials; the block comprising a photoresist mass and a material other than photoresist which is against the photoresist;

transferring a pattern from the block to the one or more conductive materials to pattern a floating gate construction from the one or more conductive materials;

forming a dielectric material over the floating gate construction; and
forming a control gate over the dielectric material.

13. The method of claim 12 further comprising defining a channel region within the semiconductor substrate beneath the floating gate construction; and forming source/drain regions within the semiconductor substrate and spaced from one another by the channel region.

14. The method of claim 12 wherein the one or more conductive materials comprise conductively doped silicon.

15. The method of claim 12 wherein the photoresist releases an acid, and wherein the material other than photoresist is a coating which cross-links when exposed to the acid from the photoresist.

16. The method of claim 12 wherein the material other than photoresist corresponds to a material designated as AZ R200™ by Clariant International, Ltd.

17. The method of claim 12 wherein the control gate, dielectric material and floating gate are incorporated into a FLASH memory device.

18. A method of forming at least two programmable read-only memory constructions, comprising:

forming at least one conductive material over a semiconductor substrate;

forming at least two patterned photoresist blocks over the conductive material; a pair of adjacent photoresist blocks being separated by a first gap;

forming a coating over the pair of adjacent photoresist blocks and across the first gap between the adjacent blocks;

selectively removing the coating from across the first gap while leaving the coating on the pair of adjacent photoresist blocks; the pair of photoresist blocks and coating remaining on the pair of photoresist blocks together defining a pair of masking blocks that are separated by a second gap; the second gap being narrower than the first gap;

transferring a pattern from the masking blocks to the conductive material to pattern a pair of spaced floating gate constructions from the conductive material;

forming a dielectric material over the spaced floating gate constructions; and

forming control gate material over the dielectric material.

19. The method of claim 18 wherein the photoresist releases an acid, and wherein the coating comprises a material which cross-links when exposed to the acid from the photoresist.

20. The method of claim 18 wherein the coating corresponds to a material designated as AZ R200™ by Clariant International, Ltd.

21. The method of claim 18 wherein the control gate material, dielectric material and floating gates are incorporated into a pair of FLASH memory devices.

22. The method of claim 18 wherein the patterned photoresist blocks are formed by a photolithographic process; wherein the photolithographic process is limited to a minimum feature size that can be obtained by the photolithographic process; and wherein a distance between the spaced floating gate constructions is less than said minimum feature size.

23. The method of claim 22 wherein the first gap corresponds to about said minimum feature size.